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SPILL PREVENTION, CONTROL, AND
COUNTERMEASURES PLAN
for Duwamish Shipyards

April 28, 1990

Prepared by: Michelle Copeland, CIH
Schumacher and Associates, Inc.
and
Mary Hess, PE
Chemquest, Inc.

Approved by: Mary Hess, PE
Chemquest, Inc.

232-01 0025734

Mary B. Hess, P.E.
HE-85-AM-B423DU

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SCOPE OF DOCUMENT

The Spill Prevention, Control and Countermeasures Plan for the Duwamish Shipyard encompasses the areas owned and leased by Duwamish Shipyard at 5658 West Marginal Way S, Seattle, WA 98106. The purpose of this plan is to provide methods and procedures to prevent the discharge of oils or hazardous chemicals described in 49 CFR, Parts 172.101 and 172.102 into navigable waters, and to contain these spills should they occur. This facility is also subject to the requirements of the Washington Department of Ecology NPDES Waste Discharge Permit No. WA 003093-7 (Appendix II). To accomplish these requirements, this document:

- Identifies potential spill sources

- Describes the in-place prevention facilities

- Defines existing spill control equipment

- Provides instructions for spill countermeasures.

Not covered under this document is the used sand blast grit storage and possible leachates. Samples of grit waste and leachate have been taken and analyses will be completed. Any further action taken will be determined as a result of this analysis and subsequent action will be according to Department of Ecology and Metro guidelines and limits.

Updating and modification of this SPCC plan is the responsibility of the Duwamish Shipyard and their focal point is Don Meberg who can be reached at (206) 767-4880.

SPILL PREVENTION AND CONTROL PLAN
DUWAMISH SHIPYARD
SEATTLE, WASHINGTON

I DESCRIPTION OF BUSINESS

The Duwamish Shipyard is located on the west side of the Duwamish River, at 5658 West Marginal Way SW in Seattle, Washington. Duwamish Shipyard conducts vessel repair operations in one of three drydocks on site. The site consists of a dock, a graving dock and pierside facilities used for vessel repair. The graving dock is located on the north side of the Duwamish Shipyard and is leased. Duwamish Shipyard does no manufacture of new vessels.

Chemicals used by Duwamish Shipyard in vessel repair operations can be grouped generally according to several categories:

- paints, thinners, and related products
- oils and related products
- degreaser solvents
- freon
- zep cleaners
- underground fuel tanks
- hydroblast water
- sandblast grit
- bilge waste
- small containers (1 gallon or less) of various chemicals

Each category of chemical will be discussed separately in Part III - Spill Prevention Mechanisms.

DESCRIPTION OF POTENTIAL SPILL SOURCES

A plan of the site is shown in Figure 1, in which storm drains and chemical storage areas are identified. Regular storage of chemicals (quantities greater than one gallon) is confined to the following areas: the paint shed and associated areas, the distillation shed, the engine shop, warehouse, hazardous waste storage area, oil storage area, and the underground fuel tanks. A description of each area is given below.

- A. **Paint Shed Area** - The paint shed, adjacent to the paint shop, is a 10' by 6' wooden structure located over an asphalt surface. It is approximately 95 feet from the nearest storm drain (#12 as shown in Figure 1), with a slight slope in grade towards the drain. In this area 1 to 5 gallon containers of paint are stored. There are no drains in the shop floor and it is 35.5' by 19.5'.

A small paint mixing shop is attached to the paint shop and has a wooden floor and stores small quantities of mixed paints and thinners which are currently in use. It has air mixers and room for one person at its work benches. It is 9.5' by 11.5'.

An 8' by 20' van is used to store paints and thinners near the paint shop. It has wooden floors and storage shelves along the left side and rear of the van. It has a ramp leading up to its door, 13 inches from the asphalt surface, and only closed containers are stored in this area. It presently stores one 55-gallon drum of solvent, 80 5-gallon containers, and 25 1-gallon container of paints or solvents. All mixing is done either in the paint shop or the paint mixing sheds.

An additional metal storage shed next to the van is used to store additional flammable materials but is presently not in use. This shed is 4' by 6' with a heater option and a 2-inch high containment pan.

On the docks, dockside paint mixing stations are used to contain paints and solvents during handling, with one station at each drydock. The dockside paint mixing stations are 10' by 5' welded stainless steel structures with 8-inch tall containment lips and raised grated floors to contain any spills. Mixing is done by air mixers in 1- to 5-gallon containers. These containers are stored temporarily in the mixing sheds until the painting job is complete.

- B. **Distillation Shed** - The distillation shed is a 11' by 6.5' welded stainless steel structure located adjacent to the paint shed. It has a 12-inch lip and a grated metal floor to contain any spills. The containment area can hold 500-gallons of liquid. The shed houses a 15 gallon capacity distillation unit which distills cleaning solvents. The distilled solvents are collected in a 55-gallon drum. Small gallon containers of solvents are stored in the shed prior to being loaded into the still.

A solvent distribution and storage shed is located adjacent to the distillation shed. This shed is 10' by 6' welded stainless steel structure with a 10" lip and grated metal floor to contain any spills. The shed houses one 55 gallon solvent drum with pump and two 55 gallon drums of waste oil. It can hold 350 gallons.

- C. **Diesel/Pump Machine Shop** - The diesel/pump machine shop is a wooden structure that houses mach-ine tools, work benches, and a small parts liquid degreaser. Small containers of cleaners and oils are used and stored in the shop typi-cally 5 gallons or less per container. The small parts degreaser uses a 30 gallon barrel of mineral spirits for degreasing in a sink mounted on top of the barrel. The floor of the shop is asphalt. The shop is located approximately 10 feet from the nearest storm drain (#11 in Figure 1).
- D. **Warehouse** - The warehouse typically stores used or rebuilt parts, obsolete or unused chemicals, and the portable freon cleaning system. The floor is concrete and the chemicals are stored on pallets until the bermed chemical storage area is competed. The chemicals are properly separated to prevent hazardous combinations or mixing to occur in the event of an accident or spill.

The portable freon cleaning system is used to clean hydraulic parts and systems. It is used on the drydocks as well as in the machine and engine shops. It holds approximately 90 gallons of freon TF and recirculates the freon through the system. Presently there is no containment for this system.

- E. **Hazardous Waste Storage Area** - The Hazardous Waste Storage Area, located on the west side of the plant, is a 32' by 30' concrete covered structure with open sides. Drapes are being installed to minimize the entry of rainwater into the structure. It is surrounded by a 7-inch berm and divided into four bermed areas for segregation of wastes. The total volume inside of each separate bermed areas is 800 gallons. The nearest storm drain is #4 on Figure 1. It is located approximately 190 feet from the Hazardous Waste Storage Area.
- F. **Oil Storage Area** - In the Oil Storage Area located behind the office, containers of oil and hydraulic fluid from 1-5 gallons in size are stored. The nearest storm drain is 34 feet from the door and the surface is of asphalt.
- G. **Underground Fuel Tanks and Pump Area** - There are five underground fuel tanks in the site. One has a 3,000 gallon capacity storing diesel fuel, the second and third each have a 3,000 gallon capacity storing leaded gasoline. The fourth has a 1,000 gallon capacity storing unleaded gasoline. In addition, a fifth tank was cleaned out and filled with sand five to ten years ago. It had held leaded gasoline at one time. These tanks have been reported to the Department of Ecology and are classified as site #001249. This area will have soil samples taken to determine if the tanks are leaking by December 1, 1990. Any further action in this area will be determined as a result of this analysis and subsequent action taken will be according to Department of Ecology guidelines for either remediation or future leak detection.

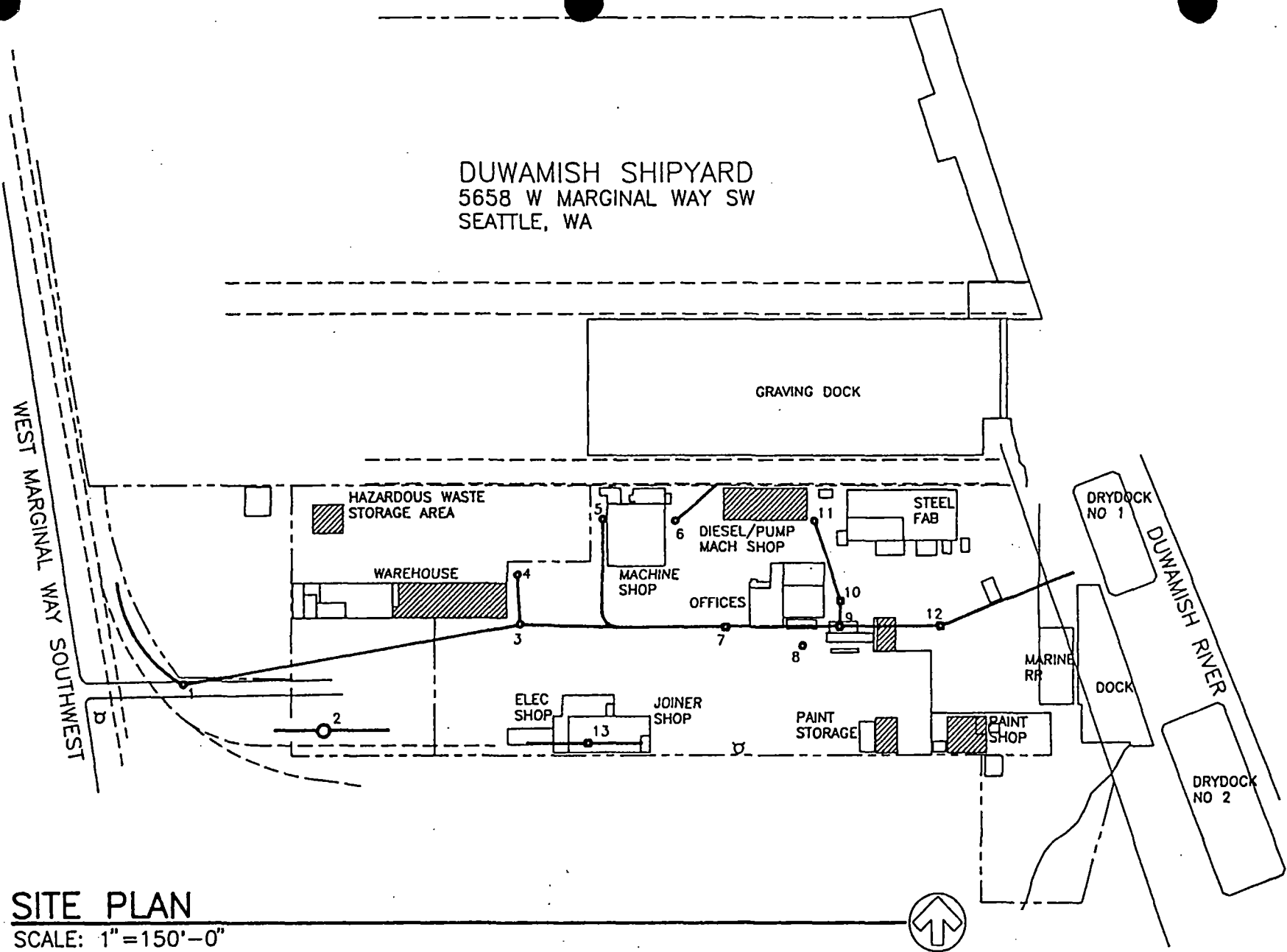


FIGURE 1
HAZARDOUS MATERIALS AREAS
STORM DRAINS

I SPILL PREVENTION MECHANISMS AND SPILL CONTROLS

This section will describe mechanisms to be employed to prevent spills, according to category of chemical and how it is used and it will note the existing spill controls in the related areas. For a more detailed list of chemical products, refer to Appendix III - MSDS Index.

A. Material: Paints, Thinners, and Related Products

Paints, thinners, and related products are used by the painters, working centrally out of the Paint Shop/Paint Shed and performing painting operations primarily in the shop and on vessels in drydock. Paints used are generally flammable and may be toxic. Other effects may include carcinogenesis (arsenicals), sensitization (isocyanates), and reproductive effects (lead and methylene chloride).

Paints enter the yard through the Main Gate, as liquids in sealed 1 to 55 gallon containers. They are delivered directly to the Paint Shop. From there, paints may be distributed throughout the yard, as indicated on Figure 2.

Unused paints are stored in the Paint Mix Shed, in the Metal Container adjacent to the Paint Shop, in two small storage containers, and in the Warehouse. Unused paints and thinners may be transferred to the Warehouse in sealed 1 to 55 gallon containers or may be stored in the vicinity of the Paint Shed. Infrequently, paints and thinners are transferred to smaller secondary containers prior to use. These containers are properly labeled, according to WAC 296-62-05411.

Paints and coatings are used (applied to the exterior or interior of vessels, including parts) either in the Paint Mix Shed or on one of the drydocks. They are mixed in either the Paint Mix Shed or a dockside paint mixing station (one on each dock). Application is generally by an airless spray through pressurized hose (maximum 200 feet length, 50-foot sections). The pump, mixer, and all containers are kept inside the Paint Mix Shed or the dockside mixing station during application. Some brush application occurs on the interior of vessels.

Controls in the Paint Mix Shed include an asphalt surface, with a distance of approximately 95 feet from the nearest storm drain. Containers greater than 5 gallons are not handled in this area and it is felt that it would be highly unlikely for a spill to occur that would be of sufficient volume to reach the storm drain. Thinners in 55-gallon drums are dispensed only in the solvent distribution and storage shed, which has a 350 gallon capacity.

The dockside paint mixing stations are also constructed of welded stainless steel, with an 8-inch lip and a 230 gallon holding capacity.

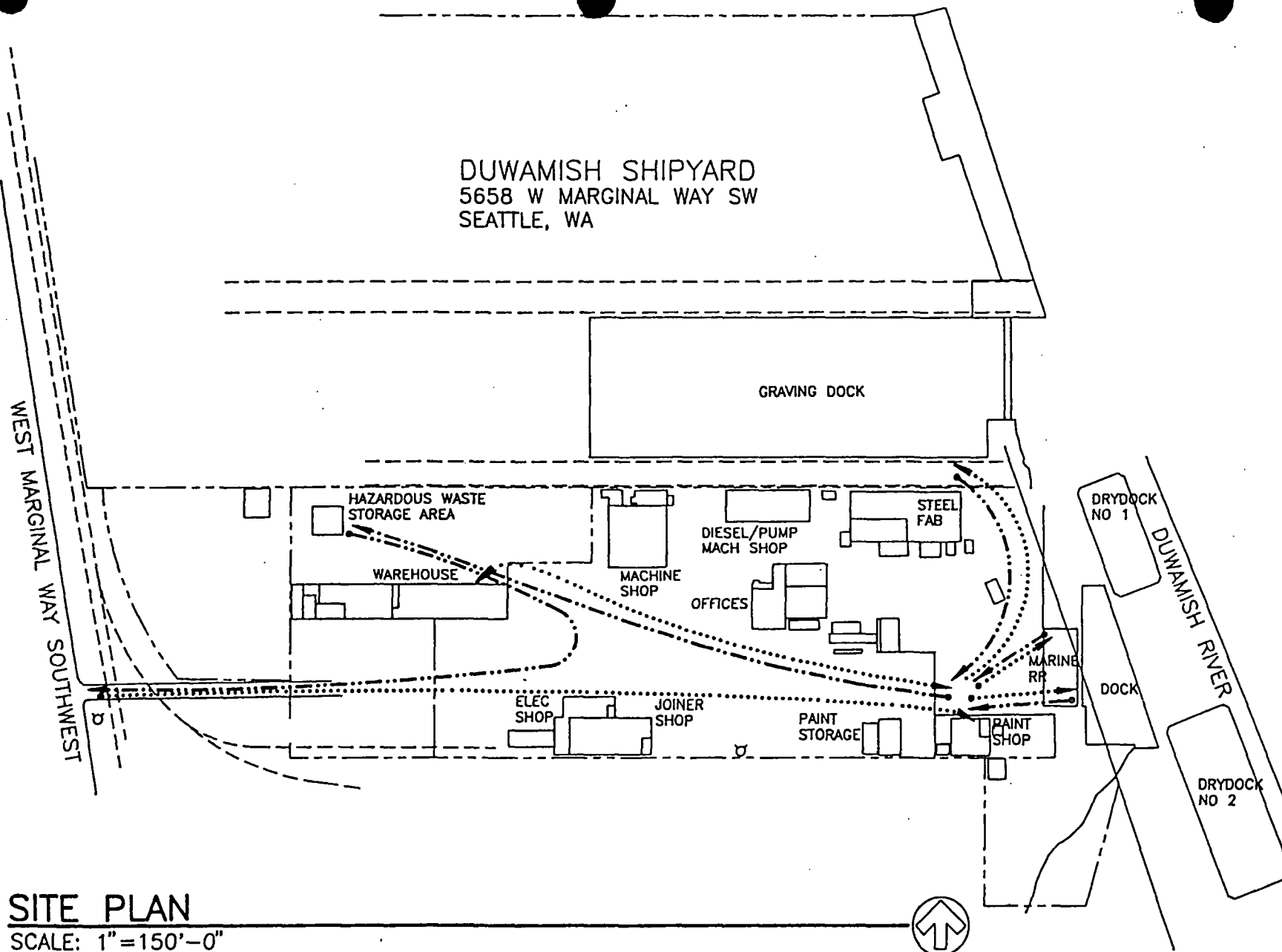


FIGURE 2
FLOW OF PAINTS THROUGH YARD

The greatest risk of a paint or thinner spill is during spray application, were a connection to fail. This can be prevented through a program of regular inspection and maintenance of the hoses and equipment, the use of a man watch at all times to assure that the hose does not "catch" on anything, and pumping from a container of maximum 5 gallon capacity.

Used solvents are returned, handcarried or on forklift, to the Distillation Shed. They are generally in 5-gallon containers which are not full and which have been resealed. In the Distillation Shed, distilled liquid is collected in a 55-gallon drum. The volume of liquid in the drum is checked, prior to loading the still. The total possible volume of liquid inside the shed would be two 55-gallon drums, several smaller (5 gallon) containers, and the still itself, for a total of approximately 150 gallons maximum. The shed has a holding capacity of 500 gallons. Full 55-gallon drums are sealed and transported by forklift to the Hazardous Waste Storage Area. Sludge is periodically collected in a 55-gallon drum for transportation to the Hazardous Waste Storage Area, for eventual disposal as a hazardous waste.

Hazardous waste is removed from the facility, within 90 days, by a chemical waste transporter, for appropriate disposal. All transportation of containers by forklift consists of closed containers on a pallet. 55-gallon drums are secured to the pallet to minimize the likelihood of spills occurring should an accident occur.

Refer to Tables I and II for summaries of spill potential and spill prevention at each stage in the distribution, use and disposal of paints, thinners, and related materials.

1990 SPCP

12 drains - only some seem to be interconnected

Paint shop closest to river (page 3)

5 USTs

- 3000 gal diesel
- 2 x 3000 gal leaded gasoline
- 1000 unleaded gasoline
- decommissioned mid 1980's

Site # 001249

paint sprayed on